

COPY OF PAPERS
ORIGINALLY FILED

RECEIVED

FEB 11 2002

TECH CENTER 1600/2900



1642

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/037,182

DATE: 02/07/2002

TIME: 18:38:43

Input Set : A:\99274Fseq.txt

Output Set: N:\CRF3\02072002\J037182.raw

3 <110> APPLICANT: Tryggvason, Karl
4 Doi, Masayuki
5 Thyboll, Jill
7 <120> TITLE OF INVENTION: Recombinant Laminin 10
9 <130> FILE REFERENCE: 99-274-F
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/037,182
C--> 12 <141> CURRENT FILING DATE: 2001-12-21
14 <150> PRIOR APPLICATION NUMBER: 60/257,449
15 <151> PRIOR FILING DATE: 2000-12-21
17 <150> PRIOR APPLICATION NUMBER: 60/279,282
18 <151> PRIOR FILING DATE: 2001-03-28
20 <160> NUMBER OF SEQ ID NOS: 36
22 <170> SOFTWARE: PatentIn Ver. 2.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 11350
26 <212> TYPE: DNA
27 <213> ORGANISM: Homo sapiens
29 <220> FEATURE:
30 <221> NAME/KEY: CDS
31 <222> LOCATION: (68)..(11152)
33 <220> FEATURE:
34 <221> NAME/KEY: sig_peptide
35 <222> LOCATION: (68)..(173)
37 <400> SEQUENCE: 1

```

38 agaccgcgcg ggcctccgcgc gcgcgcgctg tccctggagc tcggggacgc ggcccggagc 60
40 cgggaag atg gcg aag cgg ctg tgc gcg ggg agc gca ctg tgt gtt cgc 109
41 Met Ala Lys Arg Leu Cys Ala Gly Ser Ala Leu Cys Val Arg
42 1 5 10
44 ggc ccc cgg ggc ccc gcg ccg ctg ctg ctg gtc ggg ctg gcg ctg ctg 157
45 Gly Pro Arg Gly Pro Ala Pro Leu Leu Leu Val Gly Leu Ala Leu Leu
46 15 20 25 30
48 ggc gcg gcg cgg gcg cgg gag gag gcg ggc ggc ggc ttc agc ctg cac 205
49 Gly Ala Ala Arg Ala Arg Glu Glu Ala Gly Gly Gly Phe Ser Leu His
50 35 40 45
52 ccg ccc tac ttc aac ctg gcc gag ggc gcc cgc atc gcc gcc tcc gcg 253
53 Pro Pro Tyr Phe Asn Leu Ala Glu Gly Ala Arg Ile Ala Ala Ser Ala
54 50 55 60
56 acc tgc gga gag gag gcc ccg gcg cgc ggc tcc ccg cgc ccc acc gag 301
57 Thr Cys Gly Glu Glu Ala Pro Ala Arg Gly Ser Pro Arg Pro Thr Glu
58 65 70 75
60 gac ctt tac tgc aag ctg gta ggg ggc ccc gtg gcc ggc ggc gac ccc 349
61 Asp Leu Tyr Cys Lys Leu Val Gly Gly Pro Val Ala Gly Gly Asp Pro
62 80 85 90

```

ENTERED
RECEIVED
FEB 12 2002
TECH CENTER 1600/2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/037,182

DATE: 02/07/2002

TIME: 18:38:43

Input Set : A:\99274Fseq.txt

Output Set : N:\CRF3\02072002\J037182.raw

```

64 aac cag acc atc cgg ggc cag tac tgc gac atc tgc acg gct gcc aac 397
65 Asn Gln Thr Ile Arg Gly Gln Tyr Cys Asp Ile Cys Thr Ala Ala Asn
66 95 100 105 110
68 agc aac aag gca cac ccc gcg agc aat gcc atc gat ggc acg gag cgc 445
69 Ser Asn Lys Ala His Pro Ala Ser Asn Ala Ile Asp Gly Thr Glu Arg
70 115 120 125
72 tgg tgg cag agt cca ccg ctg tcc cgc ggc ctg gag tac aac gag gtc 493
73 Trp Trp Gln Ser Pro Pro Leu Ser Arg Gly Leu Glu Tyr Asn Glu Val
74 130 135 140
76 aac gtc acc ctg gac ctg ggc cag gtc ttc cac gtg gcc tac gtc ctc 541
77 Asn Val Thr Leu Asp Leu Gly Gln Val Phe His Val Ala Tyr Val Leu
78 145 150 155
80 atc aag ttt gcc aac tca ccc cgg ccg gac ctc tgg gtg ctg gag cgc 589
81 Ile Lys Phe Ala Asn Ser Pro Arg Pro Asp Leu Trp Val Leu Glu Arg
82 160 165 170
84 tcc atg gac ttc ggc cgc acc tac cag ccc tgg cag ttc ttt gcc tcc 637
85 Ser Met Asp Phe Gly Arg Thr Tyr Gln Pro Trp Gln Phe Phe Ala Ser
86 175 180 185 190
88 tct aag agg gac tgt ctg gag cgc ttc ggg cca cag acg ctg gag cgc 685
89 Ser Lys Arg Asp Cys Leu Glu Arg Phe Gly Pro Gln Thr Leu Glu Arg
90 195 200 205
92 atc aca cgg gac gac gca gcc atc tgc acc acc gag tac tca cgc atc 733
93 Ile Thr Arg Asp Asp Ala Ala Ile Cys Thr Thr Glu Tyr Ser Arg Ile
94 210 215 220
96 gtg ccc ctg gag aac gga gag atc gtg gtg tcc ctg gtg aac gga cgt 781
97 Val Pro Leu Glu Asn Gly Glu Ile Val Val Ser Leu Val Asn Gly Arg
98 225 230 235
100 ccg ggc gcc atg aat ttc tcc tac tcg ccg ctg cta cgt gag ttc acc 829
101 Pro Gly Ala Met Asn Phe Ser Tyr Ser Pro Leu Leu Arg Glu Phe Thr
102 240 245 250
104 aag gcc acc aac gtc cgc ctg cgc ttc ctg cgt acc aac acg ctg ctg 877
105 Lys Ala Thr Asn Val Arg Leu Arg Phe Leu Arg Thr Asn Thr Leu Leu
106 255 260 265 270
108 ggc cat ctc atg ggg aag gcg ctg cgg gac ccc acg gtc acc cgc cgg 925
109 Gly His Leu Met Gly Lys Ala Leu Arg Asp Pro Thr Val Thr Arg Arg
110 275 280 285
112 tat tat tac agc atc aag gat atc agc atc gga ggc cgc tgt gtc tgc 973
113 Tyr Tyr Tyr Ser Ile Lys Asp Ile Ser Ile Gly Gly Arg Cys Val Cys
114 290 295 300
116 cac ggc cac gcg gat gcc tgc gat gcc aaa gac ccc acg gac ccg ttc 1021
117 His Gly His Ala Asp Ala Cys Asp Ala Lys Asp Pro Thr Asp Pro Phe
118 305 310 315
120 agg ctg cag tgc acc tgc cag cac aac acc tgc ggg ggc acc tgc gac 1069
121 Arg Leu Gln Cys Thr Cys Gln His Asn Thr Cys Gly Gly Thr Cys Asp
122 320 325 330
124 cgc tgc tgc ccc ggc ttc aat cag cag ccg tgg aag cct gcg act gcc 1117
125 Arg Cys Cys Pro Gly Phe Asn Gln Gln Pro Trp Lys Pro Ala Thr Ala
126 335 340 345 350
128 aac agt gcc aac gag tgc cag tcc tgt aac tgc tac ggc cat gcc acc 1165

```

RAW SEQUENCE LISTING

DATE: 02/07/2002

PATENT APPLICATION: US/10/037,182

TIME: 18:38:43

Input Set : A:\99274Fseq.txt

Output Set: N:\CRF3\02072002\J037182.raw

```

129 Asn Ser Ala Asn Glu Cys Gln Ser Cys Asn Cys Tyr Gly His Ala Thr
130          355          360          365
132 gac tgt tac tac gac cct gag gtg gac cgg cgc cgc gcc agc cag agc 1213
133 Asp Cys Tyr Tyr Asp Pro Glu Val Asp Arg Arg Arg Ala Ser Gln Ser
134          370          375          380
136 ctg gat ggc acc tat cag ggt ggg ggt gtc tgt atc gac tgc cag cac 1261
137 Leu Asp Gly Thr Tyr Gln Gly Gly Gly Val Cys Ile Asp Cys Gln His
138          385          390          395
140 cac acc gcc ggc gtc aac tgt gag cgc tgc ctg ccc ggc ttc tac cgc 1309
141 His Thr Ala Gly Val Asn Cys Glu Arg Cys Leu Pro Gly Phe Tyr Arg
142          400          405          410
144 tct ccc aac cac cct ctc gac tcg ccc cac gtc tgc cgc cgc tgc aac 1357
145 Ser Pro Asn His Pro Leu Asp Ser Pro His Val Cys Arg Arg Cys Asn
146 415          420          425          430
148 tgc gag tcc gac ttc acg gat ggc acc tgc gag gac ctg acg ggt cga 1405
149 Cys Glu Ser Asp Phe Thr Asp Gly Thr Cys Glu Asp Leu Thr Gly Arg
150          435          440          445
152 tgc tac tgc cgg ccc aac ttc tct ggg gag cgg tgt gac gtg tgt gcc 1453
153 Cys Tyr Cys Arg Pro Asn Phe Ser Gly Glu Arg Cys Asp Val Cys Ala
154          450          455          460
156 gag ggc ttc acg ggc ttc cca agc tgc tac ccg acg ccc tcg tcc tcc 1501
157 Glu Gly Phe Thr Gly Phe Pro Ser Cys Tyr Pro Thr Pro Ser Ser Ser
158          465          470          475
160 aat gac acc agg gag cag gtg ctg cca gct ggc cag att gtg aat tgt 1549
161 Asn Asp Thr Arg Glu Gln Val Leu Pro Ala Gly Gln Ile Val Asn Cys
162          480          485          490
164 gac tgc agc gcg gca ggg acc cag ggc aac gcc tgc cgg aag gac cca 1597
165 Asp Cys Ser Ala Ala Gly Thr Gln Gly Asn Ala Cys Arg Lys Asp Pro
166 495          500          505          510
168 agg gtg gga cgc tgt ctg tgc aaa ccc aac ttc caa ggc acc cat tgt 1645
169 Arg Val Gly Arg Cys Leu Cys Lys Pro Asn Phe Gln Gly Thr His Cys
170          515          520          525
172 gag ctc tgc gcg cca ggg ttc tac ggc ccc ggc tgc cag ccc tgc cag 1693
173 Glu Leu Cys Ala Pro Gly Phe Tyr Gly Pro Gly Cys Gln Pro Cys Gln
174          530          535          540
176 tgt tcc agc cct gga gtg gcc gat gac cgc tgt gac cct gac aca ggc 1741
177 Cys Ser Ser Pro Gly Val Ala Asp Asp Arg Cys Asp Pro Asp Thr Gly
178          545          550          555
180 cag tgc agg tgc cga gtg ggc ttc gag ggg gcc aca tgt gat cgc tgt 1789
181 Gln Cys Arg Cys Arg Val Gly Phe Glu Gly Ala Thr Cys Asp Arg Cys
182          560          565          570
184 gcc ccc ggc tac ttt cac ttc cct ctc tgc cag ttg tgt ggc tgc agc 1837
185 Ala Pro Gly Tyr Phe His Phe Pro Leu Cys Gln Leu Cys Gly Cys Ser
186 575          580          585          590
188 cct gca gga acc ttg ccc gag ggc tgc gat gag gcc ggc cgc tgc cta 1885
189 Pro Ala Gly Thr Leu Pro Glu Gly Cys Asp Glu Ala Gly Arg Cys Leu
190          595          600          605
192 tgc cag cct gag ttt gct gga cct cat tgt gac cgg tgc cgc cct ggc 1933
193 Cys Gln Pro Glu Phe Ala Gly Pro His Cys Asp Arg Cys Arg Pro Gly

```

RAW SEQUENCE LISTING

DATE: 02/07/2002

PATENT APPLICATION: US/10/037,182

TIME: 18:38:43

Input Set : A:\99274Fseq.txt

Output Set: N:\CRF3\02072002\J037182.raw

194		610		615		620		
196	tac cat ggt ttc ccc aac tgc caa gca tgc acc tgc gac cct cgg gga	1981						
197	Tyr His Gly Phe Pro Asn Cys Gln Ala Cys Thr Cys Asp Pro Arg Gly							
198		625		630		635		
200	gcc ctg gac cag ctc tgt ggg gcg gga ggt ttg tgc cgc tgc cgc ccc	2029						
201	Ala Leu Asp Gln Leu Cys Gly Ala Gly Gly Leu Cys Arg Cys Arg Pro							
202		640		645		650		
204	ggc tac aca ggc act gcc tgc cag gaa tgc agc ccc ggc ttt cac ggc	2077						
205	Gly Tyr Thr Gly Thr Ala Cys Gln Glu Cys Ser Pro Gly Phe His Gly							
206	655		660		665		670	
208	ttc ccc agc tgt gtc ccc tgc cac tgc tct gct gaa ggc tcc ctg cac	2125						
209	Phe Pro Ser Cys Val Pro Cys His Cys Ser Ala Glu Gly Ser Leu His							
210		675		680		685		
212	gca gcc tgt gac ccc cgg agt ggg cag tgc agc tgc cgg ccc cgt gtg	2173						
213	Ala Ala Cys Asp Pro Arg Ser Gly Gln Cys Ser Cys Arg Pro Arg Val							
214		690		695		700		
216	acg ggg ctg cgg tgt gac acg tgt gtg ccc ggt gcc tac aac ttc ccc	2221						
217	Thr Gly Leu Arg Cys Asp Thr Cys Val Pro Gly Ala Tyr Asn Phe Pro							
218		705		710		715		
220	tac tgc gaa gct ggc tct tgc cac cct gcc ggt ctg gcc cca gtg gat	2269						
221	Tyr Cys Glu Ala Gly Ser Cys His Pro Ala Gly Leu Ala Pro Val Asp							
222		720		725		730		
224	cct gcc ctt cct gag gca cag gtt ccc tgt atg tgc cgg gct cac gtg	2317						
225	Pro Ala Leu Pro Glu Ala Gln Val Pro Cys Met Cys Arg Ala His Val							
226	735		740		745		750	
228	gag ggg ccg agc tgt gac cgc tgc aaa cct ggg ttc tgg gga ctg agc	2365						
229	Glu Gly Pro Ser Cys Asp Arg Cys Lys Pro Gly Phe Trp Gly Leu Ser							
230		755		760		765		
232	ccc agc aac ccc gag ggc tgt acc cgc tgc agc tgc gac ctc agg ggc	2413						
233	Pro Ser Asn Pro Glu Gly Cys Thr Arg Cys Ser Cys Asp Leu Arg Gly							
234		770		775		780		
236	aca ctg ggt gga gtt gct gag tgc cag ccg ggc acc ggc cag tgc ttc	2461						
237	Thr Leu Gly Gly Val Ala Glu Cys Gln Pro Gly Thr Gly Gln Cys Phe							
238		785		790		795		
240	tgc aag ccc cac gtg tgc ggc cag gcc tgc gcg tcc tgc aag gat ggc	2509						
241	Cys Lys Pro His Val Cys Gly Gln Ala Cys Ala Ser Cys Lys Asp Gly							
242		800		805		810		
244	ttc ttt gga ctg gat cag gct gac tat ttt ggc tgc cgc agc tgc cgg	2557						
245	Phe Phe Gly Leu Asp Gln Ala Asp Tyr Phe Gly Cys Arg Ser Cys Arg							
246	815		820		825		830	
248	tgt gac att ggc ggt gca ctg ggc cag agc tgt gaa ccg agg acg ggc	2605						
249	Cys Asp Ile Gly Gly Ala Leu Gly Gln Ser Cys Glu Pro Arg Thr Gly							
250		835		840		845		
252	gtc tgc cgg tgc cgc ccc aac acc cag ggc ccc acc tgc agc gag cct	2653						
253	Val Cys Arg Cys Arg Pro Asn Thr Gln Gly Pro Thr Cys Ser Glu Pro							
254		850		855		860		
256	gcg agg gac cac tac ctc ccg gac ctg cac cac ctg cgc ctg gag ctg	2701						
257	Ala Arg Asp His Tyr Leu Pro Asp Leu His His Leu Arg Leu Glu Leu							
258		865		870		875		

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/037,182

DATE: 02/07/2002

TIME: 18:38:43

Input Set : A:\99274Fseq.txt

Output Set: N:\CRF3\02072002\J037182.raw

```

260 gag gag gct gcc aca cct gag ggt cac gcc gtg cgc ttt ggc ttc aac 2749
261 Glu Glu Ala Ala Thr Pro Glu Gly His Ala Val Arg Phe Gly Phe Asn
262      880      885      890
264 ccc ctc gag ttc gag aac ttc agc tgg agg ggc tac gcg cag atg gca 2797
265 Pro Leu Glu Phe Glu Asn Phe Ser Trp Arg Gly Tyr Ala Gln Met Ala
266 895      900      905      910
268 cct gtc cag ccc agg atc gtg gcc agg ctg aac ctg acc tcc ccc gac 2845
269 Pro Val Gln Pro Arg Ile Val Ala Arg Leu Asn Leu Thr Ser Pro Asp
270      915      920      925
272 ctt ttc tgg ctc gtc ttc cga tac gtc aac cgg ggg gcc atg agt gtg 2893
273 Leu Phe Trp Leu Val Phe Arg Tyr Val Asn Arg Gly Ala Met Ser Val
274      930      935      940
276 agc ggg cgg gtc tct gtg cga gag gag ggc agg tcg gcc gcc tgt gcc 2941
277 Ser Gly Arg Val Ser Val Arg Glu Gly Gly Arg Ser Ala Ala Cys Ala
278      945      950      955
280 aac tgc aca gca cag agt cag ccc gtg gcc ttc cca ccc agc acg gag 2989
281 Asn Cys Thr Ala Gln Ser Gln Pro Val Ala Phe Pro Pro Ser Thr Glu
282      960      965      970
284 cct gcc ttc atc acc gtg ccc cag agg ggc ttc gga gag ccc ttt gtg 3037
285 Pro Ala Phe Ile Thr Val Pro Gln Arg Gly Phe Gly Glu Pro Phe Val
286 975      980      985      990
288 ctg aac cct ggc acc tgg gcc ctg cgt gtg gag gcc gaa ggg gtg ctc 3085
289 Leu Asn Pro Gly Thr Trp Ala Leu Arg Val Glu Ala Glu Gly Val Leu
290      995      1000      1005
292 ctg gac tac gtg gtt ctg ctg cct agc gca tac tac gag gcg gcg ctc 3133
293 Leu Asp Tyr Val Val Leu Leu Pro Ser Ala Tyr Tyr Glu Ala Ala Leu
294      1010      1015      1020
296 ctg cag ctg cgg gtg act gag gcc tgc aca tac cgt ccc tct gcc cag 3181
297 Leu Gln Leu Arg Val Thr Glu Ala Cys Thr Tyr Arg Pro Ser Ala Gln
298      1025      1030      1035
300 cag tct ggc gac aac tgc ctc ctc tac aca cac ctc ccc ctg gat ggc 3229
301 Gln Ser Gly Asp Asn Cys Leu Leu Tyr Thr His Leu Pro Leu Asp Gly
302      1040      1045      1050
304 ttc ccc tcg gcc gcc ggg ctg gag gcc ctg tgt cgc cag gac aac agc 3277
305 Phe Pro Ser Ala Ala Gly Leu Glu Ala Leu Cys Arg Gln Asp Asn Ser
306 1055      1060      1065      1070
308 ctg ccc cgg ccc tgc ccc acg gag cag ctc agc ccg tcg cac ccg cca 3325
309 Leu Pro Arg Pro Cys Pro Thr Glu Gln Leu Ser Pro Ser His Pro Pro
310      1075      1080      1085
312 ctg atc acc tgc acg ggc agt gat gtg gac gtc cag ctt caa gtg gca 3373
313 Leu Ile Thr Cys Thr Gly Ser Asp Val Asp Val Gln Leu Gln Val Ala
314      1090      1095      1100
316 gtg cca cag cca ggc cgc tat gcc cta gtg gtg gag tac gcc aat gag 3421
317 Val Pro Gln Pro Gly Arg Tyr Ala Leu Val Val Glu Tyr Ala Asn Glu
318      1105      1110      1115
320 gat gcc cgc cag gag gtg ggc gtg gct gtg cac acc cca cag cgg gcc 3469
321 Asp Ala Arg Gln Glu Val Gly Val Ala Val His Thr Pro Gln Arg Ala
322      1120      1125      1130
324 ccc cag cag ggg ctg ctc tcc ctg cac ccc tgc ctg tac agc acc ctg 3517

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/037,182

DATE: 02/07/2002

TIME: 18:38:44

Input Set : A:\99274Fseq.txt

Output Set: N:\CRF3\02072002\J037182.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date